Simona Rolli

2504 Oneida Ln
Naperville, IL 60563, USA
+1 630 548 3579 (home)
+1 630 840 2639(office)
rolli@fnal.gov

Date of Birth: 09-21-1968
Place of Birth: Pavia, Italy
Citizenship: San Marino
US permanent resident

Personal Skills

- Excellent problem solving capabilities, analytical mind and ability to learn quickly.
- Very good experience in statistical data analysis, with demonstrated ability of efficiently analyzing large datasets to extract meaningful statistical results.
- Very good experience with the Unix and Windows operating systems.
- Very good knowledge of C++, OO analysis and design (UML), FORTRAN77, Microsoft Office (Excel, Word, PowerPoint), html, C. Basic experience with Java programming, good working knowledge of Monte Carlo simulation tools.
- Strong communication and presentation skills, with professional maturity acquired working in an independent but collaborative way within international research groups (Fermi National Accelerator Laboratory, Chicago, IL, USA and CERN, Geneva, Switzerland);
- Considerable experience in project leadership.
- Languages: Italian (mother tongue), English (fluent).
- Familiarity with basic notions of financial analysis, as given e.g. in "Options, Futures and other Derivatives" by J. C. Hull and "Statistical Mechanics of Finance Markets" by J. Voit.

Education

- **1993-1996** : PhD in Physics at University of Pavia, Italy. The thesis work was on QCD phenomenology, comparing analystical theoretical calculations and Monte Carlo simulation to experimental data. The results were published and presented at conferences.
- **1992** : Laurea degree in Physics, from the University of Pavia, with a grade of 110/100 cum Laude, with a thesis on QCD phenomenolgy. The result was published and presented at conferences.
- **1987** : Maturita' classica, San Marino High School. Score : 60/60.

Professional Experience

- **1997 – present :** Reserach Associate (Senior) at Tufts University, Medford, MA.
  - High Energy Physics research actitivity as responsible for the search of new particles with the CDF detector at Fermilab. The result, which gives the world best limit on their existence, is based on modern computational techniques and has been published and presented at several conferences.
  - Management activity as co-organizer of the Annual Fermilab Users Meetings (2004,2005) ; organizer and leader of several working groups in international conferences ; l eader of several workin groups in the CDF experiment (~700 collaborators, the groups were composed by ~15 to 150 people).
  - Computing activity as project leader in the development of simulation code for the electronic data filtering of the experiment. The code was entirely written in C++ and consists of a set of highly organized and stable packages, emulating the complex hardware system bit by bit ; experience using OO databases (e.g. Objectivity/DB) in the development of the data model for large experiments and collaborations in HEP.
  - Computing courses : Object Oriented Design and Programming in C++ by G. Downing and OO Analysis and Design using the Unified Modeling Language, by C. Richter (Objective Engineering).
- **1996-1997** : Visiting Scholar a Lawrence Berkeley Laboratory, CDF group. Responsible for Monte Carlo production of simulated data.
- **November 1994- November 1995** : Visiting Scientist at the Fermilab Theory Division. Work on QCD phenomenolgy.
- **January 1994- September 1994** : Visiting Scientist at the NASA/Fermilab Astrophysics Centre. Work on theoretical cosmology related to phase transitions in the early universe.

Other Information

- Author of about 230 scientific pubblications in top scientific international journals.
- Participation to several international conferences presenting reasearch results.
- Diploma in Piano obtained at the Conservatory of Music, Vicenza, Italy (1979-1987).